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June 6, 1995

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RE: Ex Parte Contact - CC Docket No. 92-237
IAD File No. 94-102 and IAD File No. 94-104
Number Administration

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Dear Mr. Caton:

On Tuesday, June 6, 1995, the Cellular Telecommunications Industry Association (CTIA) sent a copy of the attached paper, *Who's Got Your Number? CTIA's Proposal of a New, Independent Administrator to Manage Scarce "Numbering Resources*, authored by Mr. Robert F. Roche, Director for Research, CTIA, to the following Commission personnel: Ms. Lauren J. Belvin, Mr. James L. Casserly and Mr. James R. Coltharp.

Pursuant to Section 1.1206 of the Commission's Rules, an original and one copy of this letter and attachment are being filed with your office. If there are any questions concerning this matter, please contact the undersigned.

Sincerely,

Randall S. Coleman

Attachment

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FEDERAL COMMUNICATIONS COMMISSION
OFFICE OF THE SECRETARY

Who's Got Your Number?

CTIA's Proposal of a New, Independent Administrator to Manage Scarce "Numbering" Resources

by

Robert F. Roche
CTIA Director for Research

May 24, 1995

Who's Got Your Number?

That's the question of the hour for telephone, cellular, fax and paging customers, as U.S. customers rapidly use up the available numbers in the North American Numbering Plan (NANP).

Since numbering resources are scarce, whoever administers them will have to deny some requests. Because there will be disappointed applicants, it is crucial that the numbering administrator both be unbiased and have the appearance of no bias to build credibility. The entire industry agrees that the administrator should be recognized as neutral and independent of any one type of service provider. (The current manager of the overall numbering plan, Bellcore, is owned by the Regional Bell companies and has asked the FCC to reassign the responsibility.)²

For four years, the FCC has had before it a request that a new administrator manage the North American Numbering Plan. ***CTIA proposes breaking the deadlock, and creating a "U.S. Numbering Association," a consensus-guided authority, to manage the North American Numbering Plan.*** This

The "telephone" numbers used by consumers in the U.S. for all telecommunications services are made up of a three-digit area code, a three-digit NXX or central office code, and a four digit line number. Since 1951, area codes have been designated with a "1" or a "0" as the second digit. (Adopted in 1947, the area code plan was first implemented in 1951.) When that code plan was adopted, it was thought those numbers would last to the end of the century. Those codes, though, have now been used up ("exhausted" in industry parlance), and new area codes are being created. As a result, consumers in communities across the country are facing the prospect of either losing their old area codes, or having additional codes "overlaid" over the same geographic area. The assignment of NXX central office codes has also become an issue as new service providers enter the marketplace, and seek numbers for their customers.¹

¹ The assignment of central office codes has been performed by the largest local exchange carrier within each Numbering Plan Area ("NPA" -- popularly called "area code"). See *Administration of the North American Numbering Plan, Notice of Proposed Rulemaking*, 9 FCC Rcd. 2068, at 2072 n.33 (1994).

² While the Regional Bell companies are now discussing the sale of Bellcore, which would presumably establish its independence from its historic LEC parents, the issue of ownership or affiliation will not disappear.

authority, with a neutral governing board for which all carriers will be eligible, will consider all views and the specifics of situations, in resolving numbering issues.³ It will comprise the neutral and independent administrator desired by the industry.

Ironically, the problem is the price of success. When the original code plan was adopted, fewer than 35 million phones were in Americans' hands. Now, more than 145 million phones are wired across the country -- including more than 92.4 million American homes, and 25 million businesses. More than 25 million Americans now carry cellular phones; and almost 27 million carry pagers.⁴ Fax machines are projected to number 50 million by the year 2000.⁵ As one writer observed "across the country, 80,000 new phone numbers are handed out every day to keep people wired into an increasingly communications-oriented society."⁶ With this phenomenal growth -- two out of three new telephone numbers go to subscribers to wireless services -- the rapid and fair distribution of numbers is critical to giving consumers what they want, and what they need, when they need it.

Nonetheless, while the industry has reached a consensus on the solution -- a neutral and independent, non-governmental authority to administering numbering -- the FCC is still "reflecting" on the issue. The issue still has not been resolved four years after the National Association of Regulatory Utility Commissioners (NARUC) filed its petition asking the FCC to initiate an inquiry into the costs and future administration of the numbering plan, and the implications of competition and different numbering schemes for the marketplace.

³ The NANP administrator assigns not only area codes but also: (1) Carrier Identification Codes (CICs) that enable carriers to have more direct access to the public switched network; (2) Service access codes (N00); (3) Service codes (N11 codes); Certain central office NXX codes for 900 services and the central offices for Bermuda and the Caribbean islands in the 809 NPA. Under various agreements with the T1 Committee of the Alliance for Telecommunications Industry Solutions (formerly Exchange Carrier Standards Association) and the Industry Carriers Compatibility Forum (ICCF), Bellcore also administers: (1) vertical service codes used by LECs; (2) Signaling System 7 network address codes; and (3) Automatic Number Identification digits.

⁴ See *Trends in Telephone Service*, (FCC Industry Analysis Division, February 1995), at Table 1. See also *CTIA News Release announcing 25 Millionth cellular customer*, February 24, 1995.

⁵ See 1993 *U.S. Industrial Outlook*, at 29-5.

⁶ Dave Weber "Information Superhighway Accelerates the Creation of New Area Codes," *The Orlando Sentinel*, April 24, 1995, at A4.

After receiving comments and replies on the original petition, issuing a *Notice of Inquiry* (NOI) in October 1992, receiving comments and replies, issuing a *Notice of Proposed Rulemaking* in April 1994, and receiving further comments and replies, the FCC still has not acted on the clear industry consensus -- that an independent, non-governmental administrator should assume responsibility for number administration. While the FCC has considered the issue, the problem has grown more acute.

How Real Is The Problem?

While the FCC was considering the latest round of comments and replies, number "exhaustion" proceeded -- and controversy brewed. Bellcore determined that at least eight new area codes would be needed across the country in 1995, and new codes were assigned in Alabama, Arizona, Colorado, Florida, Georgia, Illinois, Texas, Virginia and Washington state.⁷ Two more codes are being discussed for use in California and Florida.⁸ In fact, as many as 14 area codes are scheduled to change in North America this year, including Bermuda and Canada.⁹

New area codes -- either applied as "overlays" over the same geographic area as a pre-existing area code, or as a geographic split -- hold out the prospect of forcing customers to change their dialing habits to complete calls (such as requiring consumers to dial ten digits for all calls within their areas).¹⁰ This situation exists across the nation, from Oregon to Connecticut, from Michigan to Florida.¹¹

⁷ See "Area Codes: Eight New-Style Area Codes Assigned for 1995; More on the Way; Time for PBXs to Get Ready," *Edge*, October 10, 1994. "New Area Code: New Area Code '360' to be Implemented on Jan. 15 in Western Washington," *Edge*, January 16, 1995. See "Bellcore Assigns 8 Non-Traditional Area Codes," *Newsbytes News Network*, October 6, 1994. See also Dave Weber "Information Superhighway Accelerates the Creation of New Area Codes," *The Orlando Sentinel*, April 25, 1995, at A4; and see Tim Fay "Inside Perimeter, But Outside 404 Area Code; Chamblee 'was misled' about change, city official says," *The Atlanta Journal and Constitution*, May 4, 1995, at A1.

⁸ *Id.*

⁹ See "AGT Limited - Use of Area Code Effective January 8, 1995," *Canada NewsWire*, January 5, 1995. See also Jube Shiver Jr. "Numbers Crunch: Whether 'Overlays' or New Areas, You Can Count on Dialing Changes," *Los Angeles Times*, March 22, 1995, at D1.

¹⁰ See "New Method of Dialing Long Distance Calls Within Eastern Massachusetts to Begin October 15; Rates and Calling Areas Not Affected," *PR Newswire*, October 4, 1994. See also "First Duplicate Phone Numbers to Appear in 810, 313 Area Codes," *PR Newswire*, November 3, 1994 (re Michigan areas); and Diana Aitchison, "Phones Becoming More Than a Handful," *The Kansas City Star*, March 26, 1995, at A1.

¹¹ *Id.* See also "Oregon Moving Toward Second Area Code," *Telephone IP News*, April 1995. See also Susan E. Kinsman, "Area Code Resolution Goes By the Numbers," *The Hartford Courant*, March 21,

The FCC already has received more petitions requesting action on numbering issues. First, in August 1994, three paging companies filed a petition objecting to a proposed “overlay” plan in Illinois which would require wireless carriers and their customers to surrender already assigned telephone numbers, and accept new telephone numbers.¹² The surrendered numbers would be held in reserve for wireline telephone customers. Then, in December 1994, a competitive access provider, Teleport Communications Group, filed a petition objecting to a similar overlay plan in California. Teleport requested that the FCC use its authority over numbering issues to prevent the use of overlays for competitive wired and wireless customers.¹³

On January 23, 1995, the FCC released a *Declaratory Ruling and Order* which addressed part of the issue. The FCC ruled that number administration:

- “must reflect sensitivity to the growth and dynamic nature of the communications industry;”
- “must seek to facilitate entry into the communications marketplace by making numbering resources available on an efficient, timely basis to communications service providers;” and
- “should not unduly favor one technology over another.”

The FCC also opined that:

- “a successful administration of the NANP will not unduly favor or disadvantage any particular industry segment or group of consumers.”¹⁴

However, the *Declaratory Ruling* fails to recognize the urgency of numbering exhaustion. Rather than resolving numbering issues by directly assigning the code responsibility to a neutral administrator, the FCC “authorize[d] the Common Carrier Bureau to act for the Commission under

1995, at A3, and Michael E. Young, “Area Code Idea Gives Callers a New Hang-Up; Broward Residents Want to Retain Phone Numbers,” *Fort Lauderdale Sun-Sentinel*, March 11, 1995, at 1A.

¹² See *Proposed 708 Relief Plan and 630 Numbering Plan Area Code, Declaratory Ruling and Order*, IAD File No. 94-102, FCC 95-19, rel. January 23, 1995, *petition for recon. pending*.

¹³ See *Commission Seeks Comment on Teleport Petition for Declaratory Ruling on Pacific Bell Area Code Numbering Plan*, IAD File No. 94-104, Public Notice DA 94-1482, rel. December 15, 1994.

¹⁴ *Id.* at para. 18.

delegated authority in resolving future number resource allocation disputes.”¹⁵

The FCC has invited further dispute by failing to resolve the outstanding docket on number administration. In fact, its resolution of the Illinois case has contributed to the debate over the Teleport petition.

What’s The Solution?

As CTIA has stated, its position is that:

- The administration of the North American Number Plan and the assignment of new numbering resources are of great competitive importance to all segments of the telecommunications industry.
- Responsibility for the administration and assignment of numbering resources should be promptly placed in the hands of a new independent entity with a neutral governing board open to all carriers.
- Responsibility for determining the form of numbering relief should be placed in the hands of the new numbering authority, which will permit all affected parties to develop the most appropriate plan consistent with local needs and the FCC’s numbering assignment principles.

CTIA offers the attached proposal for the creation of a “U.S. Numbering Association” to constitute this consensus-guided numbering authority. This authority, with its neutral governing board, will consider all views and the specifics of situations, in resolving numbering issues. It will therefore comprise the neutral and independent administrator desired by the industry. The FCC should promptly resolve the outstanding number docket by adopting the attached proposal.

¹⁵ *Id.* at para. 36.

PROPOSAL FOR CREATING THE U.S. NUMBERING ASSOCIATION

The FCC should immediately create the United States Numbering Association (USNA) to administer the U.S. numbering resources of World Zone One. The following areas highlight the overall plan for establishing the USNA.

1. Location

The USNA would be based in Washington, DC to enhance its working relationship with the FCC and the various associations representing the telecommunications industries.

2. Representation

Due to Canadian and Caribbean sovereignty issues,¹ the USNA should only administer the resources of U.S. carriers. The USNA would coordinate assignments with their counterparts in other Zone One nations.

A Board of Directors would be established, inviting a minimal complement of representatives from each telecommunications industry segment that utilizes numbering resources. This would encompass Wireless Service Providers (WSPs), Local Exchange Carriers (LECs), Interexchange Carriers (IXCs), Competitive Access Providers (CAPs), and others (e.g. cable, payphone, satellite industries). Board member selection would be facilitated by the FCC working directly with the key associations representing the specific industry segments. A cap on representation would be established, to prevent an oversized Board. Members of the FCC could act in an advisory capacity during the formation and initial meetings of the Board. Once the USNA were fully operational, FCC interaction would be minimal.

3. Staffing and Office Requirements

Presently, five staff members perform the NANPA functions. Each RBOC also provides staff to assign NXXs at the regional level. Considering efficiencies gained by putting all assignments into one office, it is estimated a ten-person staff could handle the assignments. An Executive Director would lead the effort. Additional research is needed to determine the specific staff responsibilities and compensation levels, and project staff growth.

¹ World Zone One is composed of Bermuda, Canada, the United States and the Caribbean islands in the 809 NPA (i.e., Anguilla, Antigua, Bahamas, Barbuda, Barbados, British Virgin Islands, Carriacou, Cayman Islands, Dominica, Dominican Republic, Grenada, Jamaica, Monserrat, Nevis, Puerto Rico, St. Kitts, St. Lucia, St. Vincent and the Granadines, Trinidad and Tobago, Turks and Caicos Islands, and the U.S. Virgin Islands).

² The Canadian government has established an elaborate, though often criticized process for administering their numbering resources. The CRTC, Industry Canada, and the Canadian Numbering Administrator work together and with telecommunications service providers on numbering issues. It would be best if the Canadian, U.S., and other countries would work together in international numbering strategies in lieu of the U.S. attempting to assume and/or assert control over another country's domain.

All numbering assignments would be done through computerized databases, based on uniform assignment criteria adopted by the Board of Directors.³

Staffing requirements would take into account travel expectations to participate in national (INC) and international (ITU) numbering forums.

4. Funding

Funding for the USNA would be provided by the users of the numbering resources: WSPs, LECs, INCs, CAPs, and others. With additional research, a budget would be developed to account for projected staffing, overhead, expenses, and revenue. Initial funding would be provided through assessments to carriers, based on their numbering resources in use. Regular funding for operating revenue would be derived from assignment fees.

- A. Initial funding for development and creation of the USNA would be provided by the current numbering resource users and would be based on the formula below.⁴ Since the majority of work to be performed would be administering NPA and NXX codes, initial funding of the USNA would be based on the number of NXXs currently in use.⁵ For smaller carriers that share an NXX, the formula could be adjusted.

Initial Carrier Funding of the USNA

$$\text{USNA Budget} \div \text{Total Number of All Carrier's NXXs} \times \text{Funding Carrier Number of NXXs}$$

- B. Regular funding of the USNA would be based upon a rate structure to be developed, and based upon a fee per number assignment. NPA and NXX code assignment fees would be the primary income for USNA. A complete fee schedule would be developed for all assignments (see list below).

³ Two groups under the LEC-governed Alliance for Telecommunications Industry Solutions (ATIS) have developed numbering proposals. The Industry Numbering Committee (INC) has developed NPA Relief Planning Guidelines, and the Industry Carriers Compatibility Forum has developed NXX Assignment Guidelines. Pending review, these documents could be useful in developing USNA guidelines. ATIS' governance remains LEC controlled, despite requests from CTIA to broaden its scope. WSPs have participated in drafting the current numbering guideline documents.

⁴ This initial carrier funding mechanism is similar to the CTIA funding mechanism for Fraud Assessments and Health & Safety Assessments, based on member spectrum and pops.

⁵ For a simpler initial funding alternative, each USNA Board member company, or the association they represent, would pay a flat fee for the privilege of sitting on the Board.

5. Numbering Assignments

The USNA's primary responsibility would be assigning NPA and NXX codes. These, and other numbering resources for which a fee would be charged include:

- a) NPA (area) codes:
 - for the United States, Canadian provinces, and other locations.
 - N00 codes (e.g. 500, 800, 900 area codes), and
- b) NXX (central office) codes
 - in the 809 NPA, for Caribbean nations.
 - in the 456 NPA for routing of inbound international calls.
 - in the U.S.⁶ and Canada, and
- c) Carrier ID Codes (e.g. 10-XXX codes); and
- d) SS7 network codes

Other numbering assignments are currently performed by other entities representing telecommunications service providers, as noted below.⁷ Further research is necessary to determine the need and feasibility of putting their assignment under the USNA.

Numbering Assignment		Responsible Entity	Length	Purpose
System Identification (SID)		FCC	5	Identify market-level licensed wireless service providers.
ESN Prefixes	Manufacturer	FCC	3	First 3 digits of an 11-digit ESN, which identifies the mobile unit manufacturer.
Billing Identification (BID)		CIBERNET Corporation	5	Identifies the wireless service provider responsible for billings to a particular NXX. The BID is often a SID subset.
Carrier Number	Identification	CIBERNET Corporation	3	Identify wireless service provider companies.
Non-dialable numbers		none - WSPs arbitrarily assign #s to themselves. CIBERNET tracks usage.	3	Unique area codes, outside the range of NANP, used by wireless carriers to identify mobile units of unique application, specific to their geographic markets e.g. UPS courier tablets.
Operating Code (OCN)	Company	National Carriers Association (NECA)	3	Identify mainly LECs & IXC's for message routing and rating purposes. WSPs have started using OCNs for message processing with LECs.
Revenue Accounting Office (RAO)		Bellcore	3	Used by LECs & IXC's to identify themselves as the recipient of billings. Similar to SID or BID.

Because some of the numbers above are industry segment-specific (*i.e.* CIBERNET BIDs, and Bellcore RAOs), it would be ideal for the responsible entity to continue as the assignor. In the future however, as technologies converge, traditional industry segmentation will blur.

⁶ RBOCs presently assign NXXs to service providers in their territories. The USNA would take over this responsibility.

Wireless and landline service providers will likely be exchanging call record and billing information more frequently. This will necessitate a more uniform assignment of the various numbering codes to facilitate intercarrier routing and exchange of messages.

Summary

Multiple telecommunications industry segments now benefit from numbering assignments. The methods and entity currently employed to administer numbering resources are outdated and require immediate change.

The FCC should immediately establish the U.S. Numbering Association (USNA) to administer the numbering resources of World Zone One. The USNA would be a Washington, DC-based staff of approximately ten persons, overseen by a Board of Directors comprised of representatives from all telecommunications service providers. The USNA would be funded by assignment fees for numbering resources which telecommunications service providers require.